

<b>PRE-APPEAL BRIEF REQUEST FOR REVIEW</b>		Docket Number:  10559-914001
	Application Number  10/750,423	Filed  December 30, 2003
	First Named Inventor  David Qiang Meng	
	Art Unit  2187	Examiner  Jared Ian Rutz

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s).  
 Note: No more than five (5) pages may be provided.

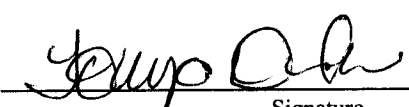
I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.  
 See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record 57,861  
 (Reg. No.)

☐ attorney or agent acting under 37 CFR 1.34.  
 Registration number if acting under 37 CFR 1.34  
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 January 18, 2007  
 Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below'.

☒ Total of 1 forms are submitted.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : David Qiang Meng  
Serial No. : 10/750,423  
Filed : December 30, 2003  
Title : PARTITIONING MEMORY

Art Unit : 2187  
Examiner : Jared Ian Rutz  
Conf. No. : 4620

**Mail Stop Appeal Brief – Patents**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Pursuant to United States Patent and Trademark Office Pre-Appeal Brief Conference Program, a request for a review of identified matters on appeal is hereby submitted with the Notice of Appeal. Review of these identified matters by a panel of examiners is requested because the rejections of record are clearly not proper and are without basis, in view of a clear legal and/or factual deficiency in the rejections. All rights to address additional matters on appeal in any subsequent appeal brief are hereby reserved.

Claims 1-26 are presented for appeal.

**Rejection of claims 1-26 under 35 U.S.C. § 112 (enablement)**

The examiner rejected claims 1-26 under 35 U.S.C. §112, first paragraph as failing to comply with the enablement requirement. Regarding claim 1, the examiner states<sup>1</sup> that “[t]he specification does not disclose how a memory device is partitioned to produce the groups recited in claim 1.”<sup>2</sup> Appellant asserts that the rejection is clearly improper and in view of a clear legal deficiency in the rejection reversal under the Pre-Appeal Brief Conference program is warranted.

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<sup>1</sup> Office Action, page 2

<sup>2</sup> The rejections of independent claims 8, 15, 18, 21, and 24 are similar to the rejection of claim 1. For example, the rejection of claim 8 states “[t]he specification does not disclose how a computer program product operates to partition a memory device as claimed,” the rejection of claim 15 states “[t]he specification does not disclose how to make and/or use a content addressable memory manager comprising a process to partition a memory device as claimed,” the rejection of claim 18 states “[t]he specification does not disclose a memory device capable of being partitioned as claimed,” the rejection of claim 21 states “[t]he specification does not disclose a memory device capable of being partitioned as claimed,” and the rejection of claim 24 states “[t]he specification does not disclose in such a way to enable one skilled in the art to make or use a content addressable memory as claimed.” While the Applicant currently addresses the rejections of claims 1-26 together, the applicant reserves the right to argue each of these claims separately.

According to *In re Wright*, the examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention.<sup>3</sup> A patent need not teach, and preferably omits, what is well known in the art.<sup>4</sup> The amount of guidance or direction needed to enable the invention is inversely related to the amount of knowledge in the state of the art as well as the predictability in the art.<sup>5</sup> The "amount of guidance or direction" refers to that information in the application, as originally filed, that teaches exactly how to make or use the invention. The more that is known in the prior art about the nature of the invention, how to make, and how to use the invention, and the more predictable the art is, the less information needs to be explicitly stated in the specification. Based on the legal standards for enablement, Appellant believes that Appellant's specification would enable one of skill in the art to make and use the invention of claims 1-26.

For example, according to the Appellant's specification:

In this example, each of the thirty-two CAM 54 entries includes a 32-bit portion for storing data (e.g., MAC addresses) for comparing in parallel with other data (e.g., a MAC address associated with a received packet). Additionally, each entry includes a 9-bit portion that stores data that represents detected matches associated with the corresponding 32-bit portion of the entry...

Each of the entries in CAM 54 is configurable by a CAM manager 58 that is implemented as microcode in the control store 50 and, which is executed by the packet engine 48. The CAM manager partitions the CAM 54 into a particular number of entries. The CAM manager 58 is capable of partitioning individual entries into two or more subentries that are individually selectable for use in parallel comparisons. By producing subentries, particular ones of the subentries are grouped for storing one type of data (e.g. MAC addresses) and selected for use in comparing the data in parallel. Other subentries in the same CAM entries are grouped for storing and comparing another type of data (e.g., IP addresses). Thus, CAM 54 is configured by CAM manager 58 for storing two or more types of data in subentries that are individually selectable for use in parallel comparisons. By configuring

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<sup>3</sup> *In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993) (examiner must provide a reasonable explanation as to why the scope of protection provided by a claim is not adequately enabled by the disclosure).

<sup>4</sup> *In re Buchner*, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991); *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986), cert. denied, 480 U.S. 947 (1987); and *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1463, 221 USPQ 481, 489 (Fed. Cir. 1984).

<sup>5</sup> *In re Fisher*, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970).

CAM 54 for storing and comparing different types of data, the CAM 54 does not need to be loaded at separate instances with different types of data (e.g., MAC addresses, IP addresses) to perform parallel comparisons with different data types.<sup>6</sup>

In another example, according to the Appellant's specification:

Referring to FIG. 4, CAM 60 represents CAM 54 configured by CAM manager 58 so that each CAM entry (e.g., entry 0 – entry 15) includes two subentries that store two different types of data. In this example, one set of sub-entries 62a, 64a, 66a, ..., 68a store MAC addresses that are used for routing packets through the physical layer of a device connected to router 22. A second set of sub-entries 62b, 64b, 66b, ..., 68b store Internet protocol (IP) addresses for routing packets on the network layer of the Transmission Control Protocol / Internet (TCP/IP)... By configuring CAM 60 so that each entry includes two 41-bit subentries (e.g., 32-bit address portion plus 9-bit status portion) that store different data types, CAM manager 58 loads appropriate addresses in each entry and selects which set of subentries to compare in parallel with other data (e.g., received packet data) to detect a potential match.<sup>7</sup>

Due to the brevity of this pre-appeal brief based on the page limit requirements of the USPTO, Appellant has not reproduced additional details and examples of how the CAM is configured by the CAM manager 58. However, such details and examples are found on pages 9-17 of Appellant's specification.

Thus, upon reading the application as originally filed, the application would enable one skilled in the art to make and use the same. The application as originally filed provides clear guidance regarding the partitioning of a content addressable memory. Accordingly, Appellant contends that the rejection under 35 U.S.C. § 112, first paragraph is improper and should be removed.

**Rejection of claims 1-26 under 35 U.S.C. § 112 (written description)**

The Examiner also rejected claims 1-26 under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement. However, the application as originally filed

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<sup>6</sup> Applicant's specification, page 9, line 8 – page 10, line 12.

<sup>7</sup> Id., page 10, line 16 – page 11, line 11.

disclosed an embodiment of a method covered by claims 1-9, an embodiment of a computer program product covered by claims 10-14, an embodiment of a CAM manger covered by claims 15-17, an embodiment of a system covered by claims 18-20, and an embodiment of a packet forwarding device covered by claims 20-26. In the rejection the examiner stated “[a]s the specification does not describe how the CAM manager performs the partitioning of the CAM... the specification does not provide evidence that Appellant had possession of the claimed invention at the time of filing.”<sup>8</sup> As argued above, Appellant has provided a description that enables one skilled in the art to make and use the invention covered by claims 1-24. Therefore, the rejection of claims 1-26 under 35 U.S.C. § 112, first paragraph should be withdrawn.

**Rejection of claims 1-26 under 35 U.S.C. § 101**

The Examiner also rejected claims 1-26 under 35 U.S.C. § 101 for lack of utility. The examiner has not met the burden required to challenge the presumption utility given to Appellant's invention. According to *In Re Brana*,<sup>9</sup> “the PTO has the initial burden of challenging the presumptively correct assertion of utility in the disclosure... Only after the PTO provides evidence showing that one of ordinary skill in the art would reasonably doubt the asserted utility does the burden shift to the applicant.” One example of evidence provided by the PTO that was sufficient to overcome the presumptively correct assertion of utility was provided in *In re Swartz* in which the PTO provided several references showing that the results were irreproducible.<sup>10</sup> The examiner has not met this burden, in the office action mailed June 27, 2006, the examiner simply stated:

As stated in the specification at page 11, line 19 through page 12, line 1, an un-configurable CAM is not capable of performing the claimed functions. As there is no disclosure of a configurable CAM, the disclosed invention is inoperative and therefore lacks utility.<sup>11</sup>

In response to the Examiner's comments, the appellant argued that the portion of the specification to which the examiner referred describes an advantage of partitioning the memory

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<sup>8</sup> See Office Action mailed October 18, 2006, page 13.

<sup>9</sup> *In Re Brana*, 51 F.3d 1560 (Fed. Cir. 1995).

<sup>10</sup> *In Re Swartz*, 232 F.3d 862 (Fed. Cir. 1999).

<sup>11</sup> Office Action, page 9

of a configurable CAM in comparison to using an un-configurable CAM.<sup>12</sup> The examiner then agreed with the appellant's conclusion in the final office action but maintained the rejection and stated:

The Examiner respectfully agrees with the Applicant's conclusion. A configurable CAM can be partitioned, and an unconfigurable CAM cannot be partitioned. However, as Applicant had not disclosed a configurable CAM, or how a configurable CAM differs from an unconfigurable CAM, Applicant has not disclosed an operative invention...

Appellant again refers to the above quoted paragraph describing that the CAM is configured by a CAM manager 58 that is implemented as microcode in the control store 50. Accordingly, a configurable CAM is disclosed and Appellant therefore Appellant has disclosed an operative invention and the disclosure has utility. Thus, the rejection of claims 1-26 under 35 U.S.C. §101 is improper and should be withdrawn.

The fact that the Appellant has addressed certain comments of the examiner does not mean that the Appellant concedes any other positions of the examiner. The fact that the Appellant has asserted certain grounds for the patentability of a claim does not mean that there are not other good grounds for patentability of that claim or other claims.

Respectfully submitted,

Date: January 18, 2007



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<sup>12</sup> See Reply dated September 26, 2006.